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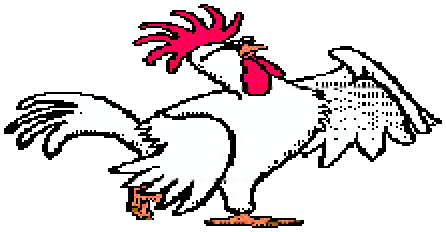

# SPECIAL EDITION FOR PUBLIC HEALTH

## Laboratory Testing Recommendations for Avian Influenza A

## Protect yourself and your community!

## Do not perform viral culture for influenza on suspected avian flu A

### Avian Influenza Background Information

Type A influenza viruses can infect several animal species, including humans, birds, pigs, horses, seals, and whales. Influenza viruses that infect birds are called “avian influenza viruses”. Birds are an especially important species because all known subtypes of influenza A viruses circulate among wild birds, which are considered the natural reservoir for influenza viruses. Avian influenza viruses do not usually directly infect humans or circulate among humans.

Influenza A viruses can be divided into subtypes on the basis of their surface proteins—hemagglutinin (HA) and neurominidase (NA). There are 15 known H subtypes. While all subtypes can be found in birds, only 3 subtypes of HA (H1, H2 and H3)and 2 subtypes of NA (N1 and N2) are known to have circulated widely in humans during the last century.

Infection causes a wide spectrum of symptoms in birds, ranging from mild illness to a highly contagious and rapidly fatal disease resulting in severe epidemics. The latter is known as “highly pathogenic avian influenza”. This form is characterized by sudden onset, severe illness, and rapid death, with a mortality that can approach 100% in birds.

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# TABLE 1. SCREENING AND TESTING PATIENTS FOR AVIAN INFLUENZA A

A. Test for influenza A in **hospitalized or ambulatory** patients (considered on a case-by-case basis in consultation with your District Health Office and the Georgia Division of Public Health) with:

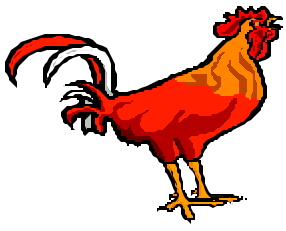
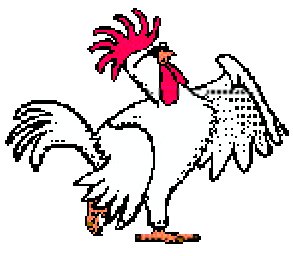
- Documented temperature of >38ºC (>100.4º F,) **AND**
- One or more of the following: cough, sore throat, shortness of breath, **AND**
- History of contact with
  - Domestic poultry (e.g. visited a poultry farm, household raising poultry, or live bird market) or a known or suspected human case of influenza A (H5N1) in an H5N1-affected country within 10 days before symptom onset, **or**
  - Infected poultry in the U.S. within 10 days before symptom onset .

B. Test for influenza A in **hospitalized** patients with:

- Radiographically confirmed pneumonia, acute respiratory distress syndrome (ARDS) or other severe respiratory illness for which an alternate diagnosis has not been established, **AND**

- History of travel within 10 days before symptom onset, to a country with documented H5N1 avian influenza in poultry and/or humans. As of February 25, 2004, these countries or territories include: Cambodia, China, Hong Kong, Indonesia. Japan, Laos, South Korea, Thailand, and Vietnam.
  - For an updated listing of H5N1-affected countries, see the OIE website at: http://www.oie.int/eng/en/_index.htm

**If you have specimens from patients that meet testing criteria for avian influenza, please contact your District health office (http://health.state.ga.us/regional/) or contact the Georgia Division of Public Health at 404-657-2588 and ask to speak with a member of the Influenza Epidemiology Team. For all after-hours calls, you may contact 1-866-PUB-Hlth (782-4585), which is available 24 hours a day, 7 days a week.**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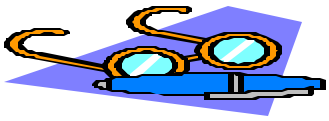
Avian influenza usually does not make wild birds sick, but can make domesticated birds very sick and kill them. Avian influenza A viruses do not usually infect humans; however, several instances of human infections and outbreaks have been reported since 1997. When such infections occur, public health authorities monitor the situation closely because of concerns about the potential for more widespread infection in the human population.

## Avian Influenza Infections in Asia and U.S.

Since December 2003, WHO has received reports of confirmed human cases and widespread poultry outbreaks of highly pathogenic avian influenza A (H5N1) in Asia. Although the human cases are thought to have resulted from direct exposure to infected live poultry or their contaminated environment, limited human-to-human transmission may be possible. The exposure of humans to ongoing poultry outbreaks is a grave concern because it enhances the potential for avian influenza A (H5N1) viruses to undergo genetic changes or recombine with human influenza viruses and result in a new influenza A virus that is easily transmitted human-to-human, thus triggering an influenza pandemic. During the last century, 3 influenza pandemics resulted in millions of deaths worldwide.

Since February 2004, several states in the U.S. have reported avian influenza among poultry. However, the strains identified in the U.S. are not the same subtype that is circulating in Asia. Both low and highly pathogenic avian influenza strains have been identified in the United States. State and national authorities are monitoring the situation closely to prevent transmission to humans and to ensure widespread outbreaks do not occur.



## Avian Influenza Surveillance

**Early recognition of human cases of avian influenza is essential. At this time, CDC recommends enhanced surveillance and diagnostic evaluation as described in Table 1. Healthcare providers are encouraged to ask patients with respiratory illness about the potential exposures outlined in the Table (page 2) and not to request viral culture for these patients. Posters summarizing screening criteria for clinicians and hospitals are available at http://health.state.ga.us/health topics/avianflu.shtml .**

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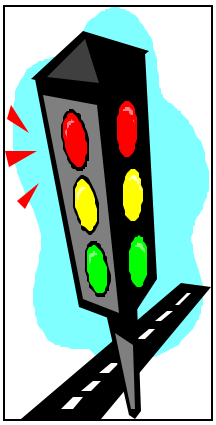

**HEADS UP FOR ALL VITEK USERS**

**bioMerieux has issued a Class I recall of Vitek GPS-107 gram positive susceptibility cards, Lot M58X, catalog # V4368. Some of the cards were stamped wrong. Use of the defective cards may pose a risk of potentially life threatening consequences due to inaccurate results.**

## Laboratory Testing Procedures

Clinical specimens from suspect avian influenza cases may be tested by polymerase chain reaction (PCR) assays using standard BSL 2 work practices in a Class II biological safety cabinet. In addition, commercial antigen detection testing can be conducted under BSL 2 levels to test for influenza. However, **viral culture should NOT be performed because of the risk to agriculture and laboratory workers.**

Highly pathogenic avian flu A is classified as a select agent and must be worked with under Biosafety Level III+ laboratory conditions as outlined in "USDA Security Policies and Procedures for Biosafety Level-3 Facilities" available at http://www.usda.gov/directives/files/dm/DM9610-001.htm. A list of select agents is available at http://www.cdc.gov/od/sap/index.htm. BSL 3+ safety requirements include controlled access double door entry with change room and shower, use of respirators, decontamination wastes, and showering out of all personnel. Laboratories working with these viruses must be certified by the U.S. Department of Agriculture. CDC recommends that virus isolation studies **not be performed** on respiratory specimens from patients who meet the criteria below unless stringent BSL 3+ conditions can be met. Therefore, respiratory virus cultures should not be performed in most clinical laboratories and such cultures should not be ordered for patients suspected of having avian influenza infection.

PCR laboratory testing is available at the Georgia Public Health Laboratory (GPHL) through your District Health Office. Please go to http://health.state.ga.us/regional/ to find contact information for your District Health Office. Specimens from patients meeting the clinical criteria below that test positive for Influenza A by PCR or antigen detection testing should be sent to GPHL for confirmation. Because the sensitivity of antigen detection tests for influenza is limited, specimens from persons meeting the clinical criteria below can be tested at GPHL even if they test negative by influenza rapid diagnostic testing.

We encourage laboratories to work with other healthcare providers to identify suspected cases of avian influenza A cases and NOT perform viral cultures on specimens from these patients. Consider establishing a system (e.g. test order forms) to ensure the healthcare provider has asked the appropriate questions of the patient before the test can be ordered.

If a laboratorian handling viral cultures, including culture of suspected cases of avian influenza A cases, does develop a respiratory illness and seeks medical care, he/she should inform the healthcare provider of possible Laboratory exposure.

Information on avian influenza is available at http://www.cdc.gov/flu/avian/.